REMARKS

In response to the Office Action of May 15, 2006, Applicant has amended the claims, which when considered with the following remarks, is deemed to place the present application in condition for allowance. Favorable consideration and allowance of all pending claims is respectfully requested. The amendments to the claims have been made in the interest of expediting prosecution of this case. Applicant reserves the right to prosecute the same or similar subject matter in this or another application.

Claims 1-34 are pending in this application. By this Amendment, Claims 1, 11, 14 and 24 have been amended, Claims 10, 28 and 34 have been cancelled without prejudice and new Claim 35 has been added. Applicant respectfully submits that no new matter has been added to this application. Moreover, it is believed that the claims as presented herein places the application in condition for allowance.

In the Office Action, the Examiner has indicated that Claims 11-14 have been objected to as being dependent upon a rejected base claim, but would be allowable over the prior art if rewritten in independent format including all of the limitations of the base claim and any intervening claim and amended to overcome the rejection under 35 U.S.C. §112, second paragraph. Claims 11 and 14 have now been amended into independent format to include all of the limitations of the base claim and intervening claims and to overcome the rejection under 35 U.S.C. §112, second paragraph. Thus, immediate allowance of Claims 11-14 is warranted and such is respectfully requested.

The Examiner has rejected Claims 1-23 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, it is the Examiner's belief that the recitation "the

deposit formation" in step (b) of Claim 1 lacks antecedent basis. Claim 1 has been amended in a manner believed to obviate this rejection. Accordingly, withdrawal of the rejection of Claims 1-23 under the second paragraph of 35 U.S.C. §112 is respectfully requested.

The Examiner has provisionally rejected Claims 1-4, 17-18 and 34 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1, 17-18, 20, 22-25 and 27-28 of co-pending Application No. 10/669,529. Upon resolution of all outstanding issues remaining in the Office Action, Applicant will consider the timely submission of a Terminal Disclaimer.

The Examiner has provisionally rejected Claims 1-5, 6-9, 15-19 and 24-30 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-3, 6-7, 9-12, 14-15, 18-23, 26-27, 29-32, 34-35 and 38-45 of co-pending Application No. 10/699,507. Upon resolution of all outstanding issues remaining in the Office Action, Applicant will consider the timely submission of a Terminal Disclaimer.

The Examiner has provisionally rejected Claims 1-4, 17-18 and 24-30 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-3, 6, 11-12, 15-18 and 20-23 of co-pending Application No. 10/699,508. Upon resolution of all outstanding issues remaining in the Office Action, Applicant will consider the timely submission of a Terminal Disclaimer.

The Examiner has rejected Claims 1-9 and 15-34 under 35 U.S.C. §102 (e) as being anticipated by either Wollenberg et al. U.S. Patent Application Publication No. 2005/0095716 ("Wollenberg '716") or Wollenberg et al. U.S. Patent Application Publication No. 2005/0095717 ("Wollenberg '717").

Wollenberg '716 discloses a high throughput screening method and system for determining lubricant performance by maintaining each sample at a predetermined temperature and optionally at a predetermined humidity for a predetermined time and measuring the storage stability of each sample to provide storage stability data for each sample.

Wollenberg '717 discloses a high throughput screening method and system for determining lubricant performance by measuring the oxygen stability of each sample to provide oxygen stability data for each sample.

As acknowledged by the Examiner, Wollenberg '716 and Wollenberg '717 fail to disclose the subject matter of Claim 1, as presently amended, which recites a high throughput method for screening lubricating oil composition samples, under program control, comprising, *inter alia*, measuring deposit formation of each sample comprising heating the sample to a predetermined temperature in the presence of a substrate and determining the amount of deposits formed on the substrate after a predetermined period of time by determining the weight of the substrate containing deposits and comparing the determined weight with the weight of the substrate to provide deposit formation data for each sample". Wollenberg '716 and Wollenberg '717 likewise fail to disclose the subject matter of Claim 24, as presently amended, recites a system for screening lubricant performance, under program control, comprising, *inter alia*, "means for measuring the deposit formation of each respective sample in the testing station comprising means for heating the sample to a predetermined temperature in the presence of a substrate and means for determining the amount of deposits formed on the substrate after a predetermined period of time by determining the weight of the substrate containing deposits and comparing the determined weight with the weight of the substrate to obtain deposit formation data associated with the sample and for transferring the deposit formation data to a computer controller."

Unquestionably, then, the presently claimed method and system of amended Claims 1-9 and 15-33 recite novel subject matter over Wollenberg '716 and Wollenberg '717. Accordingly, withdrawal of the rejection of Claims 1-9 and 15-33 under 35 U.S.C. §102 (e) is respectfully requested.

There is likewise no disclosure in Wollenberg '716 and Wollenberg '717 of a high throughput method for screening lubricating oil composition samples, under program control, comprising the steps of "(a) providing a plurality of different lubricating oil composition samples, each sample comprising (i) a major amount of at least one base oil of lubricating viscosity, and (ii) a minor amount of at least one lubricating oil additive selected from the group consisting of detergents, ashless dispersants and mixtures thereof; (b) measuring deposit formation of each sample to provide deposit formation data for each sample; and, (c) outputting the results of step (b)" as presently recited in new Claim 35.

Rather, Wollenberg '716 discloses a high throughput screening method and system for determining storage stability by maintaining each sample at a predetermined temperature and optionally at a predetermined humidity for a predetermined time and measuring the storage stability of each sample to provide storage stability data for each sample. A storage stability measurement is used to determine the shell life of a lubricating oil composition. On the other, a deposit formation measurement of a sample containing a major amount of at least one base oil of lubricating viscosity, and (ii) a minor amount of at least one lubricating oil additive selected from the group consisting of detergents, ashless dispersants and mixtures thereof is used to determine how well the additives can suspend the harmful products already formed in the bulk lubricant in an engine. See, e.g., "LUBRICANT ADDITIVES", Marcel Dekker, Inc., pp. 113-115 (2003)

(Exhibit 1). Accordingly, new Claim 35 is believed to possess novel subject matter relative to Wollenberg '716.

Additionally, in contrast to the method of new Claim 35, Wollenberg '717 discloses a high throughput screening method and system for determining oxygen stability by measuring the oxygen stability of each sample to provide oxygen stability data for each sample. Oxygen stability measurements are different than deposit formation measurements based on a sample containing a major amount of at least one base oil of lubricating viscosity, and (ii) a minor amount of at least one lubricating oil additive selected from the group consisting of detergents, ashless dispersants and mixtures thereof. This can be illustrated in LUBRICANT ADDITIVES", Marcel Dekker, Inc., pp. 113-115 (2003) (Exhibit 1) which states:

> Oxidation inhibitors, detergents, and dispersants make up the general class of additives called *stabilizers and deposit control agents*. These additives are designed to control deposit formation, either by inhibiting the oxidative breakdown of the lubricant or by suspending the harmful products already formed in the bulk lubricant. Oxidation inhibitors intercept the oxidation mechanism, and dispersants and detergents perform the suspending part. [emphasis in original]

Accordingly, new Claim 35 is believed to possess novel subject matter relative to Wollenberg '717.

The Examiner has rejected Claims 1-5, 10, 15-16, 19-27 and 31-34 under 35 U.S.C. §103 (a) as being unpatentable over Kolosov et al. U.S. Patent Publication No. 2004/0123650 ("Kolosov et al.") in view of Gatto et al. U.S. Patent Publication No. 2003/0171226 ("Gatto et al.").

As pointed out by the Examiner, nowhere does Kolosov et al. disclose or suggest the subject matter of Claim 1 which recites a high throughput method for screening lubricating oil

composition samples, under program control, comprising "(a) providing a plurality of different lubricating oil composition samples, each sample comprising (i) a major amount of at least one base oil of lubricating viscosity, (ii) a minor amount of at least one lubricating oil additive; and (b) measuring deposit formation of each sample comprising heating the sample to a predetermined temperature in the presence of a substrate and determining the amount of deposits formed on the substrate after a predetermined period of time by determining the weight of the substrate containing deposits and comparing the determined weight with the weight of the substrate to provide deposit formation data for each sample".

Nor, as pointed out by the Examiner, does Kolosov et al. disclose or suggest the subject matter of Claim 24 which recites a system for screening lubricant performance, under program control, comprising, *inter alia*, "(a) a plurality of test receptacles, each receptacle containing a different lubricating oil composition sample comprising (i) a major amount of at least one base oil of lubricating viscosity, and (ii) a minor amount of at least one lubricating oil additive ... and (c) means for measuring the deposit formation of each respective sample in the testing station comprising means for heating the sample to a predetermined temperature in the presence of a substrate and means for determining the amount of deposits formed on the substrate after a predetermined period of time by determining the weight of the substrate containing deposits and comparing the determined weight with the weight of the substrate to obtain deposit formation data associated with the sample and for transferring the deposit formation data to a computer controller".

There is likewise no disclosure or suggestion in Kolosov et al. of a high throughput method for screening lubricating oil composition samples, under program control, comprising the steps of "(a) providing a plurality of different lubricating oil composition samples, each

sample comprising (i) a major amount of at least one base oil of lubricating viscosity, and (ii) a minor amount of at least one lubricating oil additive selected from the group consisting of detergents, ashless dispersants and mixtures thereof; (b) measuring deposit formation of each sample to provide deposit formation data for each sample; and, (c) outputting the results of step (b)" as presently recited in new Claim 35.

Rather, Kolosov et al. merely disclose a system and method for screening a library of a multitude of genera of material samples for rheological properties utilizing a large number of broad tests. Exemplary material disclosed in Kolosov et al. are commercial products, which may be tested or may include ingredients that may be tested according to the present invention and include pharmaceuticals, coatings, cosmetics, adhesives, inks, foods, crop agents, detergents, protective agents, lubricants and the like. Kolosov et al. further disclose that the invention has particular utility in connection with the screening of a number of different material forms including, for example, gels, oils, solvents, greases, creams, foams and other whipped materials, ointments, pastes, powders, films, particles, bulk materials, dispersions, suspensions, emulsions or the like.

Thus, not only does Kolosov et al. fail to disclose or suggest a high throughput method and system for screening lubricating oil compositions, under program control, comprising, *inter alia*, "measuring deposit formation of each sample comprising heating the sample to a predetermined temperature in the presence of a substrate and determining the amount of deposits formed on the substrate after a predetermined period of time by determining the weight of the substrate containing deposits and comparing the determined weight with the weight of the substrate to provide deposit formation data for each sample", but also fails to disclose or suggest a plurality of different lubricating oil composition samples comprising (i) a major amount of at

least one base oil of lubricating viscosity and (ii) a minor amount of at least one lubricating oil additive as presently recited in amended Claims 1 and 24.

Gatto fails to cure the foregoing deficiencies of Kolosov et al. Specifically, nowhere does Gatto disclose or suggest a high throughput method for screening lubricating oil composition samples, under program control, comprising, "(a) providing a plurality of different lubricating oil composition samples, each sample comprising (i) a major amount of at least one base oil of lubricating viscosity, (ii) a minor amount of at least one lubricating oil additive; and (b) measuring deposit formation of each sample comprising heating the sample to a predetermined temperature in the presence of a substrate and determining the amount of deposits formed on the substrate after a predetermined period of time by determining the weight of the substrate containing deposits and comparing the determined weight with the weight of the substrate to provide deposit formation data for each sample" as generally recited in amended Claim 1.

Nor does Gatto disclose or suggest a system for screening lubricating oil composition samples, under program control, comprising, *inter alia*, "(a) a plurality of test receptacles, each receptacle containing a different lubricating oil composition sample comprising (i) a major amount of at least one base oil of lubricating viscosity, and (ii) a minor amount of at least one lubricating oil additive ... and (c) means for measuring the deposit formation of each respective sample in the testing station comprising means for heating the sample to a predetermined temperature in the presence of a substrate and means for determining the amount of deposits formed on the substrate after a predetermined period of time by determining the weight of the substrate containing deposits and comparing the determined weight with the weight of the

substrate to obtain deposit formation data associated with the sample and for transferring the deposit formation data to a computer controller" as presently recited in amended Claim 24.

Nor does Gatto disclose or suggest a high throughput method for screening lubricating oil composition samples, under program control, comprising the steps of "(a) providing a plurality of different lubricating oil composition samples, each sample comprising (i) a major amount of at least one base oil of lubricating viscosity, and (ii) a minor amount of at least one lubricating oil additive selected from the group consisting of detergents, ashless dispersants and mixtures thereof; (b) measuring deposit formation of each sample to provide deposit formation data for each sample; and, (c) outputting the results of step (b)" as presently recited in new Claim 35.

Rather, Gatto discloses unique organomolybdenum compositions, which are especially useful as lubricant additives. Gatto further discloses adding the organomolybdenum additives of Examples 1-9 therein in a base oil and manually testing the lubricating oil compositions using a Caterpillar Micro-Oxidation test. Gatto therefore also provides a *non-automatic* means to measure the oxidation properties of lubricating oil compositions.

In the Office Action, the Examiner states that "Kolosov et al. fail to teach that the lubricants containing additives therein in the combinatorial array can be screened for deposit formation by weighing the amount of deposits formed by the compositions on a substrate over time." The Examiner goes on to state that "Gatto teaches of a method for determining the stability of a lubricant oil composition by measuring the deposits formed by the sample under high-temperature thin-film oxidation conditions." Thus, in order to meet the burden of a *prima facie* obviousness rejection, the Examiner alleges that "[b]ased on the combination of Kolosov et al. and Gatto, it would have been obvious to one of ordinary skill in the art at the time of the instant invention to screen the lubricant/additive compositions in the combinatorial array taught

by Kolosov et al. for deposit formation since Kolosov et al. teach that the plurality of samples in the array are screened for various material characteristics such as the formation of sediments (i.e. deposits) therein, and Gatto teaches that it is common to screen lubricating oil compositions for their formation of deposits on a substrate over time when exposed to an oxidizing environment."

However, it well established that there must be some teaching, motivation or suggestion to select and combine references relied upon as evidence of obviousness. The fact that Kolosov et al. disclose characterizing properties of a genera of materials' disclosed therein certainly does not provide any suggestion or motivation to screen a lubricating oil composition comprising (i) a major amount of at least one base oil of lubricating viscosity, and (ii) a minor amount of at least one lubricating oil additive for deposit formation of each respective sample in a testing station to obtain deposit formation data associated with the sample in a high throughput manner. In fact, it is not seen where Kolosov et al. even remotely discloses screening lubricating oil compositions for deposit formation data much less a lubricating oil composition comprising (i) a major amount of at least one base oil of lubricating viscosity, and (ii) a minor amount of at least one lubricating oil additive for deposit formation data.

Instead, Kolosov et al. disclose a large number of broad tests for characterizing properties of a genera of materials such as density, melt index, thermal degradation, aging characteristics, weight-average molecular weight, number-average molecular weight, viscosity-average molecular weight, peak molecular weight, approximate molecular weight, polydispersity index, molecular-weight-distribution shape, relative or absolute component concentration, conversion, concentration, mass, hydrodynamic radius, radius of gyration, chemical composition, amounts of residual monomer, presence and amounts of other low-molecular weight impurities in samples,

particle or molecular size, intrinsic viscosity, molecular shape, molecular conformation, and/or agglomeration or assemblage of molecules.

Certainly, Gatto does not cure the deficiencies of Kolosov et al. as Gatto provide no suggestion or motivation to test lubricating oil compositions for deposit formation in a high throughput method or system to obtain deposit formation data associated with the sample under program control. Instead, Gatto simply discloses a non-automatic means to measure the oxidation properties of lubricating oil compositions. Only by using Applicants' disclosure as a guide has the Examiner been able to piece together the claimed invention. Accordingly, amended Claims 1-5, 10, 15-16, 19-27 and 31-34 and new Claim 35 are believed to be nonobvious, and therefore patentable, over Kolosov et al. and Gatto. Thus, withdrawal of the rejection is respectfully requested.

The Examiner has rejected Claims 1-9, 15-16, 19-28 and 31-34 under 35 U.S.C. §103 (a) as being unpatentable over Kolosov et al. in view of Tolvanen et al. U.S. Patent No. 5,715,046 ("Tolvanen et al.").

The deficiencies of Kolosov et al. discussed above apply with equal force to this rejection. Tolvanen et al. fail to cure the foregoing deficiencies of Kolosov et al. Specifically, nowhere does Tolvanen et al. disclose or suggest a high throughput method for screening lubricating oil composition samples, under program control, comprising "(a) providing a plurality of different lubricating oil composition samples, each sample comprising (i) a major amount of at least one base oil of lubricating viscosity; (ii) a minor amount of at least one lubricating oil additive; and (b) measuring deposit formation of each sample comprising heating the sample to a predetermined temperature in the presence of a substrate and determining the amount of deposits formed on the substrate after a predetermined period of time by determining

the weight of the substrate containing deposits and comparing the determined weight with the weight of the substrate to provide deposit formation data for each sample" as presently recited in amended Claim 1. Nor does Tolvanen et al. disclose or suggest a system for screening lubricating oil composition samples, under program control, system for screening lubricant performance, under program control, comprising, *inter alia*, "(a) a plurality of test receptacles, each receptacle containing a different lubricating oil composition sample comprising (i) a major amount of at least one base oil of lubricating viscosity, and (ii) a minor amount of at least one lubricating oil additive ... and (c) means for measuring the deposit formation of each respective sample in the testing station comprising means for heating the sample to a predetermined temperature in the presence of a substrate and means for determining the amount of deposits formed on the substrate after a predetermined period of time by determining the weight of the substrate containing deposits and comparing the determined weight with the weight of the substrate to obtain deposit formation data associated with the sample and for transferring the deposit formation data to a computer controller" as presently recited in amended Claim 24.

Rather, Tolvanen et al. disclose a method of determining the stability of heavy oil fractions derived from petroleum or the stability of their mixtures by adding diluents and asphaltene-flocculating agents to an oil sample until the flocculation point of asphaltenes is reached; using a suitable prism to direct a first light ray from a light source onto the surface of the oil sample, wherein the sample is in a closed space formed in part by a side wall of the prism; and measuring the intensity of a second light ray scattered or reflected from the surface of the sample, whereby a sharp increase in the intensity of the second light ray indicates the flocculation point of the asphaltenes. Tolvanen et al. further disclose that it was surprisingly found that by designing the analyzer's measuring cell for oil stability measurement so that

measuring takes place through a prism, the drawbacks of methods representing the state of the art could be avoided. Tolvanen et al. goes on to state that when a prism is used there is no open oil sample surface in the measuring device, so the measuring device can be entirely closed.

Tolvanen et al., however, provides no suggestion or motivation to test lubricating oil compositions comprising (i) a major amount of at least one base oil of lubricating viscosity, (ii) a minor amount of at least one lubricating oil additive for deposit formation heating the sample to a predetermined temperature in the presence of a substrate and determining the amount of deposits formed on the substrate after a predetermined period of time by determining the weight of the substrate containing deposits in a high throughput method or system to obtain deposit formation data associated with the sample under program control. As such, even by combining Tolvanen et al. with Kolosov et al. one skilled in the art would not even arrive at the claimed invention. For the foregoing reasons, amended Claims 1-9, 15-16, 19-28 and 31-34 are believed to be nonobvious, and therefore patentable, over Kolosov et al. and Tolvanen et al.

With respect to new Claim 35, Tolvanen et al. likewise provides no suggestion or motivation of a high throughput method for screening lubricating oil composition samples, under program control, comprising the steps of "(a) providing a plurality of different lubricating oil composition samples, each sample comprising (i) a major amount of at least one base oil of lubricating viscosity, and (ii) a minor amount of at least one lubricating oil additive selected from the group consisting of detergents, ashless dispersants and mixtures thereof; (b) measuring deposit formation of each sample to provide deposit formation data for each sample; and, (c) outputting the results of step (b)" as presently recited in Claim 35. Instead as discussed above, Tolvanen et al. simply discloses a method of determining the stability of heavy oil fractions derived from petroleum or the stability of their mixtures by adding diluents and asphaltene-

flocculating agents to an oil sample. Nothing in Tolvanen et al. would lead one skilled in the art to modify Kolosov et al. by looking to the disclosure of Tolvanen et al. and arrive at the claimed invention. As such, new Claim 35 is also believed to patentable over Kolosov et al. and Tolvanen et al.

The Examiner has rejected Claims 17-18 under 35 U.S.C. §103 (a) as being unpatentable over Kolosov et al. in view of Gatto as applied to Claims 1-5, 10, 15-16, 19-27 and 31-34 or over Kolosov et al. in view of Tolvanen et al. as applied to Claims 1-9, 15-16, 19-28 and 31-34 above, and further in view of Smrcka et al. European Patent Application No. 1,233,361 ("Smrcka").

The foregoing deficiencies of Kolosov et al., Gatto and Tolvanen et al. discussed above with respect to the rejections of Claim 1, from which Claims 17 and 18 ultimately depend, apply with equal force to this rejection. Smrcka et al. do not cure and is not cited as curing the above-noted deficiencies of Kolosov et al., Gatto and Tolvanen et al. Rather, Smrcka et al. is merely cited for its disclosure of storing test results in a data carrier. Accordingly, Claims 17 and 18 are believed to be nonobvious, and therefore patentable, over Kolosov et al., Gatto, Tolvanen et al. and Smrcka et al.

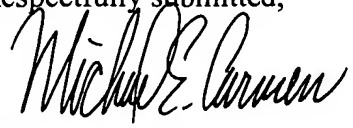
The Examiner has rejected Claims 29 and 30 under 35 U.S.C. §103 (a) as being unpatentable over Kolosov in view of Gatto as applied to Claims 1-5, 10, 15-16, 19-27 and 31-34 or over Kolosov et al. in view of Tolvanen et al. as applied to Claims 1-9, 15-16, 19-28 and 31-34 above, and further in view of Garr et al. U.S. Patent No. 5,993,662 ("Garr et al.").

The foregoing deficiencies of Kolosov et al., Gatto and Tolvanen et al. discussed above with respect to the rejections of Claim 24, from which Claims 29 and 30 ultimately depend, apply with equal force to this rejection. Garr et al. do not cure and is not cited as curing the above-noted deficiencies of Kolosov et al., Gatto and Tolvanen et al. Rather Garr et al. is simply

cited for the disclosure of employing a bar code to identify individual containers. Accordingly, Claims 29 and 30 are believed to be nonobvious, and therefore patentable, over Kolosov et al., Gatto, Tolvanen et al. and Garr et al.

For the foregoing reasons, amended Claims 1-34 and new Claim 35 as presented herein are believed to be in condition for allowance. Such early and favorable action is earnestly solicited.

Respectfully submitted,



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